COMcheck-EZ Web-Based Training Questions - Additions

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

When designing for additions to existing buildings, reports frequently come out as non-compliant.....Can "compliance" be documented by showing that the existing level of "failure" is less than prior?

Simply showing less failure than prior conditions is not an acceptable form of compliance to energy codes for additions.

COMcheck-EZ Web-Based Training Questions - Basement/Below Grade Walls

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

How do you handle basement walls that are partially exposed but the exposure varies because the grade is sloped?

If the basement walls are on average over 85% buried (below grade) than the walls are considered a basement wall. For the depth below grade, you can take an average of the depth across the sloped line as the input.

COMcheck-EZ Web-Based Training Questions - Building Envelope

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

For the continuous insulation value, do you add R-values of construction materials?

No, construction materials are included in the drop down list of assemblies. For assembly types that do not fit into any of the assemblies shown in the drop down list in COM*check*, the user can choose "Other" as the assembly. If you use "Other" as the assembly type, you must enter an overall U-factor for the entire assembly (including air films). Be prepared to provide the building department with manufacturers' literature or documentation of U-factor calculations.

The problem that we have encountered is when the structure is existing unaltered. This building was built in the 70's and does not comply with COM*check*. If we replace a rooftop unit, we can not get COM*check* to pass.

What you are describing is an alteration to a building. The major national codes do not require that the entire building meet energy code in this case -- only the equipment or building component that is being changed or added.

We have had a situation where a City requires compliance with current Code when we are adding a single door in the wall of an existing 40,000 sq. ft. building. The building cannot be brought into compliance without extensive additional insulation. Required?

The major national energy codes typically only require that the added (or changed) component(s) comply with the code. You may want to verify this with your local officials.

We are renovating an existing building. The demolition process reduces the building down to only 8" block walls and a built up roof. Would it be acceptable to treat the building as new construction?

This sounds like a reasonable approach and would likely be acceptable to the local building official.

If we have a covered breezeway are the walls considered interior or exterior?

If airflow exists next to the wall then it would act thermally like, and therefore be considered, an exterior wall.

How do we handle a clerestory?

The glazing and wall or roof areas of the clerestory are handled in COM*check* the same as other glazing and wall/roof components.

How are demised partitions treated between adjacent retail spaces in a strip retail center? Are they treated as exterior walls or not included at all in the wall area?

Typically envelope compliance is done on the entire building at the time the shell is designed/constructed, in which case the demising walls are not included. If you are doing a tenant space after construction of the shell, the demising walls would still be ignored because the original design assumes these will always be between conditioned spaces.

What is budget U- factor? Are values should be more than proposed U-factor?

The term "budget" refers to the values that are allowed as in the amount you have to use. To comply, you may not go beyond this value.

Do thermal mass credits exist?

COM*check* accounts for thermal mass in walls using the same algorithms and parameters used in ENVSTD--heat capacity and insulation position. Although in ENVSTD values for these inputs are entered directly by the user, in COM*check* defaults heat capacity, and insulation position parameters are provided based on the user's selection of wall type. The exception to this is the *Other* wall category, for which users must specify the heat capacity.

All COM*check* compliance calculations assume that any insulation in an above-grade exterior wall (or above-grade portion of a below-grade wall assembly) is integral with the thermal mass of the wall, as opposed to assuming the insulation is either on the exterior or on the interior of the wall. This assumption was made because the insulation position has little impact, producing a maximum of about a 1% change in cumulative space-condition loads in a high-mass wall. In addition, for many wall assemblies it is difficult to determine which of the three options -- interior, integral, or exterior -- is the most appropriate.

This assumption also appears to be appropriate for the most common wall assemblies; e.g., metal stud walls. Coincidentally, the integral insulation position appears to result in the most favorable impact from high heat-capacity walls. Assuming integral insulation is the best case for advocates of masonry construction and effectively eliminates any grounds for criticism of simplifications in COM*check* in this area.

How do you account for louver square footage within the building envelope?

In ASHRAE 90.1, up to 1% of the opaque area of the assembly is exempted from the envelope requirement if the entire assembly is insulated. Otherwise an area averaged U-factor needs to be used in the calculation.

How do you figure the insulation value in steel buildings where the insulation is compressed?

COM*check* has assembly options for metal buildings (roof and wall assemblies) where the insulation is compressed.

Metal Roof without Thermal Blocks and Metal Roof with Thermal Blocks. The base assembly consists of a roof where the insulation is draped over metal purlins and compressed where the metal structural members are attached to the metal purlins. R-values for additional continuous insulation may be added to the base assembly. Two cases of screw-down metal building roofs are considered in COM*check*. One case involves the use of a 1 in. x 3 in. foam thermal block (other than compressed insulation) between the purlin and metal roof members (NAIMA 1998). The other case is identical but without the thermal block material at the purlins. The base assembly R-value for uninsulated roofs is 0.78, representing the interior and exterior air film coefficients. Balance of assembly U-factors and framing factors is used as coefficients of a linear regression equation developed to represent the assembly U-factors of standard insulation R-values for metal building roof assemblies, as listed in the table.

Metal Building Roof (MBR) Assembly U-Factors for Standard Insulation Thicknesses

Insulation R-Value	Assembly U-Factor MBR with Thermal Block	Assembly U-Factor MBR without Thermal Block
R-10	0.104	0.138
R-11	0.098	0.134
R-13	0.088	0.122
R-19	0.07	0.101

Other. COM*check* allows the user to define a roof assembly by specifying its overall effective U-factor. This option permits the user to accurately describe the performance of any roof assembly not adequately covered by the predefined roof types.

Metal Wall Without Thermal Blocks. The base assembly consists of wall insulation that is compressed between metal wall panels and the metal structure. The heat capacity of the wall is assumed to be 1.0. For un-insulated metal walls, the overall R-value for the assembly is 0.85 assuming only indoor and outdoor air film coefficient R-values of 0.17 and 0.68. The balance of assembly R-value and framing factor for insulated metal building walls is used as coefficients in a linear regression equation developed to represent assembly U-factors for various standard insulation R-values, as provided in the table for metal building wall systems with 7 ft. girt spacing.

Metal Building Wall (MBW) Assembly U-factors for Standard Insulation Thicknesses

Insulation R-Value	Assembly U-factor MBW without thermal block
R-10	0.138
R-11	0.134
R-13	0.122
R-19	0.101

Other. COM*check* allows the user to define a wall assembly by specifying its overall effective U factor. This option permits the user to accurately describe the performance of any wall assembly not adequately covered by the predefined wall types.

COMcheck-EZ Web-Based Training Questions - Curtain Walls

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

Is curtain wall a window or exterior wall?

Curtain wall assemblies cannot be entered in COM*check* as an exterior wall assembly because you cannot account for the solar heat gains from the glazing. Furthermore, curtain walls cannot be entered solely as a window due to the fact the program needs to associate windows to walls to calculate the window-to-wall ratio (WWR). These assemblies should be entered in the following manner:

- Choose "other" as the assembly type from the drop down menu under Exterior Walls.
- Enter the total square footage for the entire assembly (including the framing)
- Enter the U-factor from the manufacturer for the framing or entire assembly
- Choose "other" as the assembly type from the drop down menu under Windows
- Enter the estimated square footage of the glazing (this number will be slightly less than total square footage of the entire assembly). Basically you are subtracting the small amount of framing from the square footage (typically this will be a 1/100 ratio).
- Enter the U-factor from the manufacturer for the center of glass or entire assembly

How would you calculate spandrel glazing in a curtain wall glazing system ... as a window or a solid wall construction with a calculated U-value?

Curtain walls with spandrels should be entered as "Other" walls with their applicable U-factor of spandrel entered separately from the glazing portion. Calculate the entire spandrel area, framing, insulation, air films, etc. and enter in COM*check* as an "other" wall type. You can edit the word "other" and input the name of the wall system and then the overall U-Factor of the entire wall.

What is the best way to distinguish between vision glass panels and insulated spandrel panels in an entirely glass high-rise?

Insulated spandrel panels can be entered as "Other" walls with the factory tested assembly U-factors. Vision glass panels need to be entered as windows with their entire assembly U-factor, not just the center of glass U-factor.

Can you count mullion caps as part of the solid portion of a glazed wall system - is the glazed portion counted in the window drop down literally the exposed glazing to the exterior?

No, if the assembly U-factor for the glazing includes the mullions. Otherwise the mullion cap U-factor needs to be entered as an "Other" opaque wall. The glazed portion can be entered as "Other" window in the window drop down.

Can you count structural silicone in a butt glazed system as part of the solid portion of the wall? Further, can you count the mullion behind the glazing in a butt glazed system as part of the solid portion of the wall?

No. Structural silicone can not be entered as solid portion of wall if it is integral to the glazing.

How should you handle an exterior wall that is all storefront framing with various types of glazing with different U-values?

Each window with a different U-factor should be entered separately as part of a single 'Other' wall with an overall area-averaged U-factor. Some high window-to-wall ratio construction may be difficult to get to comply using COM*check*. In those cases, an energy analysis program may be used to show compliance using the performance approach.

COMcheck-EZ Web-Based Training Questions - Lighting

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

Will LED lamps be included in COM*check* in the future?

It will be a while before LEDs are a common overhead or main lighting source. But when they are, they will be included.

During the DEMO you switched from T12 4 lamp fixtures, to T8 2 lamps fixtures. What about lighting levels? Sure we saved watts, but 1/2 lamps, will reduce the lights?

Good question. This was just an example of one option to consider. You would need to ensure that the result of this meets needed light levels.

What if you are doing a remodel of a building? For example the only thing they are going to change out is the interior lighting. Would you use new construction or addition?

COM*check* does not currently have the capability to show compliance with alterations such as this. This capability is scheduled to be added in October 2005.

I deal with buildings with large power consuming equipment. How come we are only concerned with the lighting loads for energy conservation?

The building energy codes are written specifically for the building shell and the equipment associated with maintaining the space. Functions and associated equipment are not addressed. Other regulations such as EPACT provide equipment efficiency requirements.

Does the lighting take into account task lighting?

Task lighting that is part of the overall lighting design is to be included as part of the overall lighting compliance. Task lights are entered in COM*check* the same as other overhead lights.

Whole Building or Area Category - Is there an advantage to using one or the other?

Whole building can be simpler. However, space-by-space offers more flexibility to be able to account for some special spaces that might need extra lighting wattage.

For HID and fluorescent lighting, does COM*check* have predetermined input wattage levels or are manufacturer's specifications to be used?

COM*check* has default wattages for commonly used lamp types, but these values are conservatively high. So, it is best to use the manufacturer's data if available.

What about exterior lighting?

Exterior lighting is currently only addressed in the mandatory requirements. There is no trade-off.

How do you properly enter line voltage track (length of track versus quantity of fixture designed)?

The current requirement in the ASHRAE code is to use the wattage of the fixtures or 3- W/linear ft., whichever is greater.

COMcheck-EZ Web-Based Training Questions - Mechanical

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

Why doesn't Mechanical equipment matter? The EER doesn't make a difference?

Mechanical inputs in COM*check* are optional. The program does not compute a pass or fail. The efficiencies of the equipment that are entered into the program will make a difference in the requirements that are generated in the mechanical compliance report. The report is a summary that is generated according to the systems that are entered in the program and is additional requirements to meet the energy code for mechanical systems.

Why can't the mechanical portion of the report be defined as compliant or not compliant?

Because most requirements in the mechanical section of the energy code are mandatory, the *Mechanical* section of the software works somewhat differently from the *Envelope* and *Lighting* sections. Rather than generating a numerical compliance index, the Mechanical section generates a customized list of mandatory requirements applicable to the mechanical components you identify.

How do you define heating/cooling system efficiencies up front?

Heating and cooling equipment efficiencies are input on the Mechanical screen.

Does the software allow you to identify cooling and heating produced by a central plant that is remote from the building (i.e. campus chilled water, steam)?

Yes, you input the characteristics of the central system since this is the source of heating/cooling for the building.

How does the reviewer know what we use for our HVAC load calculations?

Heating and cooling system design loads for the purpose of sizing systems and equipment should be determined in accordance with generally accepted engineering standards and handbooks acceptable to the adopting authority and plan reviewer.

For a closed-loop geothermal heat pump (with closed loop piping buried in a trench or in wells) do you enter "ground water coupled" or "closed

loop"?

If the unit is a simple ground buried system, this is closed loop.

What ventilation is required commercial per square ft. (90.1)?

Ventilation requirements are specified in ASHRAE Standard 62-1999. To obtain this standard go to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (html,) website.

COMcheck-EZ Web-Based Training Questions - Orientation/Projection Factors

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

Why do we not input orientation of building or walls and windows?

Orientation is optional in COM*check*. If an orientation has been assigned to each wall, window, door, and below-grade wall assembly, the compliance calculation will be based on a proposed building using those orientations. This result may be slightly different than the result obtained when orientation is not specified. In the latter case, assemblies are assumed to be equally distributed according to default aspect ratio of 2:1. The orientation-specific compliance calculation will not be performed until **all** assemblies have been assigned an orientation.

How does the program account for ASHRAE 90.1 allowing for higher SC (shading coefficient) on the north windows?

If an orientation has been assigned to each wall, window, door, and below-grade wall assembly, the compliance calculation will be based on a proposed building using those orientations. This result may be slightly different than the result obtained when orientation is not specified. In the latter case, assemblies are assumed to be equally distributed according to a code-specified aspect ratio. The orientation-specific compliance calculation will not be performed until **all** assemblies have been assigned an orientation.

If we have two buildings facing each other with a bridge connecting them and windows under the bridge, how do we calculate the projection factor? Or if we have doors or windows in a wall of a covered breezeway, how do we calculate the projection factor?

Technically, this would be the full length of the bridge or breezeway divided by the distance from the bridge/breezeway to the bottom of window.

Are projection factors not allowed in RES*check*?

Orientation and Projection Factors are not available unless the project is in a location of < 3500 heating degree days and the code is 1998 IECC, 2000 IECC, or 2003 IECC or when Pima, Arizona < 4000 ft or Georgia. The reason these options are not available outside of the locations listed is that the program offers credit only towards a mandatory solar heat gain coefficient (SHGC) of .40.

Are projection factors for windows available in RES*check*? We are using awnings and louvers to reduce HVAC load and would like to take credit for that in a residential project.

Projection factors are not available unless the project is in a location of < 3500 heating degree days and the code is 1998 IECC, 2000 IECC, or 2003 IECC or when Pima, Arizona < 4000 ft or Georgia. The reason these options are not available outside of the locations listed is that the program offers credit only towards a mandatory solar heat gain coefficient (SHGC) of .40.

COMcheck-EZ Web-Based Training Questions - Roofs

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

I design pre-engineered metal buildings. They typically have 3" draped insulation at the roof panel. If we have interior built out space, we will generally put 6" (R19) insulation above the ceiling. Do we get any credit for this insulation?

If the interior built out space is not sealed according to the energy code, you cannot get credit for the R19 insulation above the ceiling. In which I am assuming you are describing a drop down ceiling that is not completely sealed with gyp board that would not be considered part of the exterior building envelope components required to meet the energy code. The only value of insulation that would be accounted for is the 3" draped insulation at the roof panel.

Can lay-in ceiling tile be considered sealed and part of the envelope?

No, ceiling tile is specifically not allowed as a ceiling barrier between conditioned and unconditioned space.

For roofs, how is the area calculated?

The ceiling area should be measured on the slope of the finished interior surface.

If we have tapered roof insulation do we use an average of the insulation thickness?

Tapered roof insulation in a typical attic configuration is already accounted for in COMcheck.

For an all-wood joist/rafter/truss, the base assembly consists of a roof truss with a 2x4 bottom chord. The ceiling is attached directly to the bottom chord of the truss, and the attic space above is ventilated. Insulation is located directly on top of the ceiling, first filling the cavities between the wood, then continuously covering wood and cavity insulation. No credit is given for roofing materials, because they are above the ventilated space. The heat flow path through the wood members is calculated to be the same depth as the insulation. The assembly includes R-0.17 for the exterior air film, R-0.56 for 0.625-in. gypsum board, and R-0.61 for interior air film with heat flow up. U-factors are calculated for standard framing, where insulation is tapered around the perimeter with resultant decreases in thermal resistance. The table shows the balance of assembly R-value calculation details. Area weighting factors for the parallel paths are 85% full-depth insulation, 5% half-depth insulation, and 10% framing.

Balance of Assembly R-values for All-Wood Joist Roof

Description	R Value at Insulation	R Value at Joists
Outside Air Film	0.17	0.17
Wood Joists/Cavity	0	4.38
5/8-in. Gypsum Board	0.56	0.56
Inside Air Film	0.61	0.61
Total Path R-value	**1.34**	**5.72**

Total Assembly R-value = 1.0 / (0.85/1.34 + 0.05/1.34 + 0.10/5.72) = 1.45

Why is unknown ceiling insulation R-value amount already factored into the program?

The program automatically includes the insulation value of the standard construction items that are part of the roof (rafters, sheathing, deck, etc.) so that only added insulation (batts, blow, and insulated sheathing) will need to be input into the program.

How is roof insulation treated over unconditioned space? Should that square footage be included in the roof area?

No, only envelope components surrounding conditioned space should be included.

COMcheck-EZ Web-Based Training Questions - Slabs

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

What is "continuous" insulation for a slab on grade?

Slab-on-grade floors are typically insulated with foam board laid vertically and/or horizontally along the edge of the slab with no breaks. This is considered continuous insulation.

Will the slab on grade screen let you tell the program that you are using both horizontal and vertical rigid insulation?

Yes, choose *"Horizontal with Vertical Slab Insulation"* as your Option. Horizontal insulation extending away from the foundation must be covered by pavement or at least 10 in. of soil. If placed horizontally with vertical insulation, insulation depth is the vertical distance from the top of the slab downward to the bottom slab, and then horizontally underneath the slab. Five options are available for horizontal plus vertical insulation depth: 1', 2', 3', 4', and *Fully Insulated*. Select *Fully Insulated* if the insulation runs vertically and then horizontally under the entire slab.

Can you take credit for floor insulation if there is no thermal break between the slab and ground?

The general idea of insulation is to provide that thermal break. For slab floors, the insulation needs to either form a break with the footing or cover the footing to separate it from the ground.

How are slabs-on-grade treated in an air conditioned basement?

A basement by definition does not have a slab on grade. This term only applies to slab floors where the slab edge is not buried. If the entire slab floor is greater than 12" below grade, it would not be entered in COM*check* as part of the building envelope.

COMcheck-EZ Web-Based Training Questions - Software

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

When will the COMcheck include ASHRAE 90.1 2004?

The next major release of COMcheck (October 2005) will include an option for compliance to ASHRAE Standard 90.1-2004.

Why does the project type not have a "remodel" option?

The ability to show compliance with alteration projects (remodels) is scheduled to be complete and ready for release in October 2005.

Should engineers or architects do the calculations?

COMcheck was designed to be easy to use without requiring users to do any complicated calculations. However, a local jurisdiction may require architect or engineer involvement.

Do these programs satisfy any Corps of Engineers energy compliance requirements? How about other DoD or Federal client requirements?

The COMcheck Code menu option for ASHRAE Standard 90.1-1999/2001 would meet most of the Federal requirements, unless specifically identified by the agency. Federal agencies must generally meet the requirements of 10 CFR 434 (FEDCOM).

Is TRACE 700 an acceptable Total Building Performance program?

Yes.

Are saved reports compatible with AutoCAD 2004?

COMcheck does not have an option for importing data. However you could save your project as a report by clicking on "Save Report" from the File Menu. Open the report in a text processor and resave the report with a **.txt extension or a file extension that is compatible with your CAD program. Try importing the saved file into your program after resaving it or try copy and paste. The actual compliance certificate would be displayed on your CAD drawings.

Is the application XML, Java? Some desktops may need to be updated to allow this if so.

COMcheck is based on Java; no additional update is required because our software comes with all the required system files. These are installed automatically and do not affect any other software in your system.

I have software already installed on my computer. Is this a new version? Do I have to install software again?

You can check the website (www.energycodes.gov (html,)) to get details on the current version.

Is there a way to make the project file save to a specific folder rather than the default folder within the program folder?

Yes, choose the option "Save As" from the File Menu. Choosing this option gives you the ability to save your project in a specific folder rather than the default folder.

If I save the report, is the input data saved?

No, to save your input data choose "Save or Save As" from the File menu.

Will the next COMcheck release address Wisconsin Comm 63?

Comm63 is based on IECC 2000 with Wisconsin amendments. You can use COMcheck only for building envelope compliance, but not for HVAC or lighting. Set the code to be used with the "2000 IECC". For additional information please refer to the Wisconsin section of the Status of State Energy Codes (html,).

Can we create a corporate account, for multiple projects so that we do not have a lot of individual accounts for different projects?

Yes, you can create one corporate account and store as many projects as you need. If many individuals are accessing these projects, you can share the account and password, but be aware that any one can change any project because it is unrestricted access.

How do I know what code year to use?

To check the status of the applicable energy code required in your area, choose the state in which the project will be located from the Status of State Energy Codes (html,).

Can you change the code selected during input stages or at the end of the input?

Building types and assembly components can be different between codes. If the code is changed during input stages, items that show up in red will need to be updated before the program can calculate compliance.

If I did all the input under the 2003 IECC, can I go back at the end and change to 90.1? Will COMcheck then recalculate everything, or do I have to perform all new input under 90.1?

Building types and assembly components are different between IECC and 90.1. If the code is changed between the two, items that show up in red will need to be updated before the program can calculate compliance.

Can this report be used for LEED certification?

No, but it can give you a rough idea if you are in the ball park. COMcheck compliance calculations for both ASHRAE Standard 90.1 and IECC are based on component trade-offs within Envelope and Lighting. COMcheck calculates separate compliance indices for the Envelope and Lighting sections, and provides a check list for documenting Mechanical section compliance. While the compliance indices can be used to show if the Envelope or Lighting portion of the building is "above code", there is no ability to determine that the building as a whole is "above code". The intent of COMcheck is only to determine code compliance on a Pass/Fail basis and it is not applicable to "above code" calculations for whole buildings.

How does the reviewer know that we meet all requirements on the checklist?

Some requirements listed in the checklist could require additional documentation for the plan reviewer. There may also be requirements listed that will require an in-the-field inspection to verify compliance (a good example is vapor retarders which would require an inspection to verify this requirement has been met.).

Are there any credits or provisions allowed for solar or renewable energy systems?

To receive credit for solar energy systems, compliance would need to be shown using the whole building performance method. This requires using a different software application that performs an energy analysis on the building. The Building Energy Software Tools Directory (html,) has a listing of several different software applications that run energy simulations.

Is REScheck used in a three story over basement apartment building (total of 4 floors) but only 3 count science basement is a basement?

The definition of a residential building that is still covered under the residential code is one that is three stories or less above grade. The below grade floors do not count for this determination.

COMcheck-EZ Web-Based Training Questions - Training

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

What is the definition of a Professional Designer?

ASHRAE/IESNA Standard 90.1 defines a design professional as an architect or engineer licensed to practice in accordance with applicable state licensing laws.

Can we be certified to use COMcheck-EZ?

There is not certification offered or required to use COMcheck-EZ or any of the Building Energy Codes compliance tools.

There IS certification. ICC testing on Plan Reviewer and Field Inspector (commercial), as well as Residential Plan Reviewer/Field Inspector are offered and are currently given for 2003 IECC certification.

Unfortunately, BECP does not offer ICC certification or ICC continuing education credits. We are currently working with ICC for future training events to offer extended continuing education credits toward various certifications.

When will you be holding the more extensive training regarding curtain wall construction?

We plan on offering a web-based training event on curtain wall construction and compliance in Fall 2005. Scheduled events are listed on the Online Training (html,) Training Events page.

How do I obtain the certificate of completion for this training?

An evaluation form with a certificate request box was sent to all registered attendees after the event. If you did not receive the form and would still like to receive a certificate, please send your mailing address in an email to techsupport@becp.pnl.gov.

How do I obtain the required certification for P.E. CEU documentation?

A Certificate of Completion is offered to registered attendees to allow them to self report for credit.

How do I apply for the 1.5 AIA CEU credits?

If you are an AIA member and submitted your AIA member # on the evaluation form sent after the web cast, your credits were submitted to AIA for processing. We are required to submit AIA credits within two weeks of

the event.

Do we get CEUs or PDH credit for attending?

Unfortunately, we did not offer CEU's or PDH credits. If you did not request a Certificate of Completion, please respond back to this email and we will have a certificate mailed to you that you can use to submit your credits through your organization or state office.

COMcheck-EZ Web-Based Training Questions - Walls

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

Does the square footage of the wall include the window area?

Wall inputs should include the square footage of all windows and doors.

Is the only time we need to indicate interior walls is when they abut an unconditioned area?

This is correct.

Does EIFS system count as continuous insulation?

Exterior Insulation and Finish Systems (EIFS) are multi-layered exterior wall systems that are used on both commercial buildings and homes. COM*check* does not have an assembly option to choose from for these types of wall systems. If you are installing an EIFS system, the entire component should be entered as "other" from the drop down list of assembly types. You can edit the word "other" and input the name of the wall system and then enter the overall U-factor of the entire wall assembly.

How do you define exterior walls for pre-engineered metal buildings? They seem to always come up non-compliant.

COM*check* allows the user to define an "Other" wall assembly by specifying its overall effective U factor. This option permits the user to accurately describe the performance of any wall assembly not adequately covered by the predefined wall types.

How do you account for doors and windows in interior walls? Currently COM*check* does not allow doors and windows to be linked to an interior wall.

Doors and windows in interior walls need to be entered as 'Other' interior walls with their U-factors. In this case, net areas of interior opaque wall and door/window components should be specified separately. Alternatively, an area averaged U-factor can be calculated for the entire interior wall and can be entered as "Other".

COMcheck-EZ Web-Based Training Questions - Windows

This article contains questions asked during the August 18, 2005 live broadcast of the COMcheck-EZ Web-Based Training (html,) session. The original language of the questions and answers has been modified to make them as generic as possible while retaining the applicable specific information.

When inputting window sizes, is there a way to account for variations in window frame thicknesses? (i.e. a 2" wide frame versus a 4" wide frame)

Window dimensions are taken as the outside of the frame.

How do you get to the default table?

In the input cell for U-factor right click with your mouse and select "Use Default" from the drop down menu. This automatically inputs the program default for the window you have already defined on that line.

Do the default values represent the maximum allowable values for each component?

The default values are simply an estimate of what the typical (but close to worst case) value might be. It is strongly recommended that you get the actual value.

What is glazing exactly?

Glazing is any translucent or transparent material in exterior openings of buildings, including windows, skylights, sliding doors, the glass area of opaque doors, and glass block.

Are window areas added to wall areas or subtracted out?

Wall inputs should should be gross wall area including the square footage of all windows and doors. The calculated window-to-wall ratio (% of glazing) will be displayed on the Envelope Compliance Certificate.

Will the trade-off capability of the COM*check* program still allow buildings with an extreme amount of glass? (greater than 65%) What is the realistic upper limit?

Compliance to the IECC in COM*check* is allowed for buildings where the window and glazed door area is not greater than 50% of the gross area of the above grade walls. Buildings with more glazing will need to meet the applicable provisions of ASHRAE 90.1. COM*check* can be used to show compliance to 90.1.